Docket No.: TJU0001-107
PATENT

Appl. Number: 10/621,684
Filed: 07/17/03

REMARKS

Status of the Claims

Claims 23-44 are in the application.

Claims 23-44 have been rejected.

By way of this amendment, claims 29, 35 and 37 have been canceled, claims 23, 32, 38, 39 and 42 have been amended and claims 45-47 have been added.

Upon entry of this amendment, claims 23-28, 30-34-36 and 38-47 will be pending.

Summary of the Amendment

Claim 23 has been amended to specifically recite that the active agent is a non-peptide. Support for this amendment is found throughout the specification, particularly on pages 18 and 26. Claim 23 has also been amended to specifically recite that the compositions comprise a pharmaceutically acceptable carrier or diluent. Support for this amendment is found throughout the specification, particularly on page 29.

Claims 32 has been amended to delete reference to active agents that are peptides in view of the amendment to claim 23.

Claims 38 and 39 have been amended to be dependent on claim 33.

Claim 42 has been amended to be an independent claim. The limitations from claim 23 have been expressly set forth in claim 42.

New claims 45-47 refer to specific embodiments of the subject matter of claim 42.

The claims as amended and new claims 45-47 all read on the previously elected species.

Rejections under 35 U.S.C. §112, first paragraph

Claims 23-25, 28-32, 35-37, 39, 41-43 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for ST receptor binding ligand with Sequence of SEQ ID NO" 2, 3 and 5-56, does not reasonably provide enablement for fragments and derivatives of such peptides. it is asserted that the specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly

connected, to make and use the invention commensurate in scope with these claims. The Official Action states:

> it is not routine in the art to screen large numbers of polypeptide fragments or variants where the expectation of retaining of similar function (ST receptor binding property) is unpredictable based on the instant disclosure. Based on the specification disclosure predicting which amino acid fragments and derivatives would maintain function is well outside the realm of routine experimentation; thus a skilled artisan would require guidance, such as information regarding the size, and sequence of deletions and alterations which preserve the activity.

Applicant respectfully disagrees. The definitions on pages 6 and 7 and the disclosure on pages 13-23 of the specification make clear the what constitutes derivatives and fragments, how to make them and how to test them to determine their suitability for use in the present invention. While the experimentation may be extensive, it would not be undue. Those having skill in the art would be able to routinely synthesize the derivatives and fragments and test them to determine if they bind to the ST receptor. The assay to do so is well known and the expectation of success is reasonable. Contrary to the arguments presented in the Official Action, the screening of ligands for ST receptor binding activity is routine and those skilled in the art could do so without undue experimentation.

It is well settled that Applicant's assertion of enablement are to be accepted as true unless some reasoning and evidence is provided to doubt the object truth of such assertions. Conclusory statements are insufficient to establish doubt as to the object truth of Applicant's assertions. Nothing in the record supports a conclusion of non-enablement. The rejection should be withdrawn.

Applicant respectfully request that the rejection of claims 23-25, 28-32, 35-37, 39, 41-43 under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement description requirement be withdrawn.

Claims 23-25, 28-32, 35-37, 39 and 41-43 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. It is asserted that

the claims contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. It is asserted in the Official Action that the specification does not "clearly allow persons of ordinary skill in the art to recognize that [he or she] invented what is claimed."

Applicant respectfully disagrees. The specification clearly describes the invention such that those having ordinary skill in the art would recognize that Applicant was in possession of the claimed invention at the time the application was filed. it is clear from the specification that Applicant was in possession of ST receptor ligands at the time the application was filed. The specification provides adequate disclosure for compliance with the written description requirements. Applicant's have disclosed numerous examples of ST receptor ligands as well as providing an extensive description of how others can be identified. Applicants have disclosed antibodies and peptides including fragments and derivatives of such peptides and antibodies. Those having skill in the art immediately recognize that Applicant was in possession of the claimed invention at the time at the application was filed.

Applicant respectfully request that the rejection of claims 23-25, 28-32, 35-37, 39 and 41-43 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement be withdrawn.

Rejections under 35 U.S.C. §112, second paragraph

Claims 23-44 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is asserted that claims 23-44 are incomplete for omitting essential elements, such as omission amounting to a gap between the elements. The omitted elements are: the carrier or diluent present in pharmaceutical compositions.

Applicants have amended the claims to include the pharmaceutically acceptable carriers or diluents. The rejection is, accordingly, moot.

Applicant respectfully request that the rejection of claims 23-44 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention, be withdrawn.

Rejections under 35 U.S.C. §102

Claims 23-27 and 41 have been rejected under 35 U.S.C. 102(b) as being anticipated by US Patent 4,490,080 (Duflot et al).

Duflot et al discloses conjugates comprising ST receptor binding moiety and a protein toxin.

Applicants have amended the claim 23 to limit the active agent to a non-peptide agent. The rejection is, accordingly, moot.

Applicant respectfully request that the rejection of claims 23-27 and 41 under 35 U.S.C. 102(b) as being anticipated by Duflot et al., be withdrawn.

Claims 23-24 and 41 have been rejected under 35 U.S.C. 102(b) as being anticipated by US Patent 4,411,888 (Klipstein et al.)

Klipstein et al. disclose conjugates and pharmaceuticals comprising synthetic ST linked to cholera toxin.

Applicants have amended the claim 23 to limit the active agent to a non-peptide agent. The rejection is, accordingly, moot.

Applicant respectfully request that the rejection of claims 23-27 and 41 under 35 U.S.C. 102(b) as being anticipated by Klipstein et al., be withdrawn.

Double Patenting Rejections

Claims 23-44 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-22 of U.S. Patent No. 5,518,888.

Claims 23-44 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-58 of U.S. Patent No. 5,879,656.

Claims 23-28 and 41-42 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-10 of U.S. Patent No. 6,060,037.

Applicants urge that the claims in each of U.S. Patent No. 5,518,888, U.S. Patent No. 5,879,656, and U.S. Patent No. 6,060,037, are exclusively directed at separate and distinct inventions as set forth in the Restriction Requirement issued in the instant application on October 1, 2004. That restriction requirement indicated that the claims in the application contained seven groups of patentably distinct inventions. According to the Official Action that contained the restriction requirement, because the several inventions were distinct, restriction was proper and Applicants were required to elect a single invention for examination.

Applicants elected Group I which embraces compositions of matter as a separate and distinct invention from those directed at imaging methods, treatment methods and gene therapy methods. Each of the pending claims in the present application is directed to compositions of matter.

The claims in U.S. Patent No. 5,518,888 are directed at methods of imaging colorectal tumors. The invention claimed in the 888 Patent corresponds to a non-elected group in the present application. A restriction requirement was issued in Serial Number 08/141,892 (the application from which the 888 Patent issued) containing the identical division of patentably distinct inventions as in the present application. In response to that restriction requirement, Applicants elected Group II, methods of treatment, which corresponds to non-elected Group IV in the present application. The 888 Patent has no claims to conjugated compounds.

The claims in U.S. Patent No. 5,879,656 are directed at methods of treating colorectal tumors. The invention claimed in the 656 Patent corresponds to a non-elected group in the present application. A restriction requirement was issued in Serial Number 08/583,447 (from which the 656 patent issued) containing four patentably distinct inventions: Group I directed to compounds and compositions, Group II directed to treatment methods, Group III directed to imaging methods and Group IV directed to methods of delivering nucleic acids. In response to the restriction requirement issued in Serial Number 08/583,447, Applicants

elected Group II, methods of treatment which corresponds to non-elected Groups II, V and VI in the present application. The 656 Patent has no claims to conjugated compounds.

The claims in U.S. Patent No. 6,060,037 are directed at methods of imaging colorectal tumors, in vitro methods of screening individuals for metastatic colorectal cancer, in vitro methods of determining a tumor cell is colorectal tumor cell, methods of treating colorectal tumors, methods of delivering nucleic acid molecules to cell and kits for determining whether a sample contains a colorectal cancer cell. The invention claimed in the 037 Patent corresponds to non-elected groups in the present application. The 656 Patent has no claims to conjugated compounds.

U.S. Patent No. 5,518,888, U.S. Patent No. 5,879,656, and U.S. Patent No. 6,060,037, and the present application are related to each other. The application which issued as the 888 Patent is the parent. The application which issued as 656 Patent was a continuation in part of the application which issued as the 888 Patent. The present application is a continuation of an abandoned application which was a continuation of the application that issued as the 656 Patent. The application which issued as the 037 Patent was a US National stage application which claimed priority as a continuation-in-part to the application that issued as the 888 Patent. The applications are clearly members of the same family.

None of the claims from any of U.S. Patent No. 5,518,888, U.S. Patent No. 5,879,656 and U.S. Patent No. 6,060,037 cited as rendering the claims of the present application unpatentable for obvious-type double patenting could have been prosecuted in the present application upon the election of Group I. The restriction requirement makes clear that the subject matter of the cited claims in each instance was that of a separate and patentably distinct invention. A finding that the claims are obvious in view of the cited claims is completely contrary and inconsistent with the position taken by the Office in requiring restriction.

The presently claimed invention encompasses compositions of matter. The claims cited as rendering the present claims unpatentable are directed to imaging methods, treatment methods and gene delivery methods, which each correspond to subject matter deemed by the patent office as being separate and patentably distinct subject matter. The Office has deemed

that the composition claims are patentably distinct from the various cited method claims (which themselves have been deemed separate and patentably distinct from each other). There is no question or ambiguity that each pending claim is a composition claim and each cited claim is a method claim. The Office has deemed these inventions to be separate and patentably distinct inventions. Accordingly, the rejection of obviousness-type double patenting with respect to U.S. Patent Nos. 5,518,888, 5,879,656 and 6,060,037 should be withdrawn.

Claims 23-28 and 41-42 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-15 of U.S. Patent No. 5,962,220.

Claims 23-28 and 41-42 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-9 of U.S. Patent No. 6,087,109.

Claims 23-25, 28-32, 35-56, 41-42 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 6, 8, 10, 32, 37, 9, 41-42, 54-55, 58, 63-64, 92, 96-97, 99, 102, 108, 109, 114, 116, 118-119, 125-153 of copending Application No. 08/468,449.

At this time, no claims have been indicated to be allowable if the double patenting rejections were overcome. It is therefore premature to file a terminal disclaimer. If determined to be appropriate based upon the subject matter of the rejected claims, Applicant would file such a terminal disclaimer upon indication that claims would be otherwise allowable.

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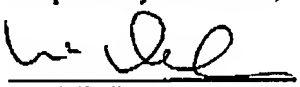
Conclusion

Claims 23-28, 30-34-36 and 38-47 are in condition for allowance. An indication of allowability is therefore earnestly solicited. Applicant invites the Examiner to contact the undersigned at 215-665-5592 to clarify any unresolved issues raised by this response.

As indicated on the transmittal accompanying this response, the Commissioner is hereby authorized to charge any debit or credit any overpayment to Deposit Account No. 50-1275.

Respectfully submitted,



Mark DeLuca
Registration No. 33,229

Date: November 2, 2005
COZEN O'CONNOR, P.C.
1900 Market Street
Philadelphia, PA 19103-3508
Telephone: 215.665.5592
Facsimile: 215.665.2013